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09/982,721	10/18/2001	Michael Slocombe	74120-301396	8719

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EXAMINER

PATEL, ASHOKKUMAR B

ART UNIT PAPER NUMBER

2154

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/982,721

Applicant(s)

SLOCOMBE ET AL.

Examiner

Ashok B. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-13 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-13 are subject to examination.

#### **Priority**

2. Examiner apologies for an error indicating that the effective filing date for the subject matter in the pending claims in this application is 1 1/16/2001 and the assertion is withdrawn as such.

The effective filing date for the subject matter in the pending claims in this application is 1 0/18/2001.

#### ***Response to Arguments***

3. Applicant's arguments filed 4/28/2005 have been fully considered but they are not persuasive for the reasons as stated as part of the following claim rejections.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-8, 10, 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by McCanne (US Published Application No. 2005/0010653).

**Referring to claim 1,**

McCanne discloses a method of content delivery in a network, comprising (Paragraph 0028):

associating devices in a Domain Name System (DNS) with content server systems located in the network (Paragraph 0156, Fig. 13, N\* are DNS devices and S\* are content server systems), the content server systems maintaining and serving content of a content provider (Paragraph 0157), each DNS device configured to resolve the name of the content provider to an address for the content server system with which such DNS device is associated (Paragraph 0156);

assigning to the DNS devices a common address, the common address being usable to resolve the name of the content provider such that a request for content of the content provider by a content requestor is sent to the content server system nearest the content requestor (Paragraph 0148 DNS servers N1\*, N2\* and N3\* assigned common anycast address; Paragraph 0148: DNS server configured to resolve to nearest server to client);

monitoring one or more load characteristics of one or more of the content server systems in the network; (para.0136,0137,0141,0155,0164)

determining if one or more of the load characteristics exceeds a predefined overload metric (para.0136,0137,0141,0155,0164, note: load characteristic is inherent);  
and

for each content server system having a load characteristic that exceeds the predefined overload metric, discontinuing advertising of the content server by an associated DNS device. (para.0136, 0137,0141,0155,0164)

**Referring to claim 2,**

McCanne discloses the method of claim 1, wherein the common address is an anycast address (Paragraph 0148).

**Referring to claim 3,**

McCanne discloses the method of claim 2, wherein routing information associated with the anycast address is advertised over the network by the DNS devices in accordance with the Border Gateway Protocol (Paragraph 0148).

**Referring to claim 4,**

McCanne discloses the method of claim 1, wherein the content server systems are geographically distributed across the network (Paragraph 0094).

**Referring to claim 5,**

McCanne discloses the method of claim 1, wherein the DNS devices are collocated with the content server systems with which the DNS devices are associated (Paragraph 0156).

**Referring to claim 6,**

McCanne discloses the method of claim 1, wherein each content server system and associated DNS device are located in a different Internet Service Provider Point of Presence (Paragraph 0106).

**Referring to claim 7,**

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McCanne discloses the method of claim 1 , wherein each content server system and associated DNS device is located at or near an entry point of the network (Paragraph 0103).

**Referring to claim 8,**

McCanne discloses the method of claim 1, wherein the content server systems comprise cache systems that cache content of the content provider (Paragraph 0182).

**Referring to claim 10,**

Claim 10 describes a computer program product storing instructions for carrying out the method described in claims 1 and 4. Claim 10 is rejected for the same reasons as claims 1 and 4.

**Referring to claim 11,**

McCanne discloses a content distribution system comprising:

content distribution nodes connected to a content provider, a content provider Domain Name System (DNS) server and a content requestor DNS server via the Internet, each content distribution node including a DNS server coupled to and associated with a content server system, the content server system operating to store content originating with the content provider and serve content to a content requestor (Fig. 12: content servers associated with DNS servers, Paragraph 0157: content servers form nodes in a distribution system), and each DNS server being assigned an address common to all of the DNS servers in the content distribution nodes (Paragraph 0133),, the common address being provided by the content provider DNS server to the

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content requestor DNS server in response to a DNS request from the content requestor DNS server (Paragraph 0148: N\* sent to client for a DNS query), thereby enabling the content requestor DNS server to use the Internet to select a path to the content distribution node nearest the content requestor and forward the DNS request to the selected node (Paragraph 148: DNS request routed to nearby DNS node; and

the DNS server in the selected node being configured to resolve the name of the content provider in the DNS request to an IP address of the associated content server system and cause the IP address to be returned to the content requestor (Paragraph 0149: DNS server selects nearby content server).

the DNS server in the selected node capable of monitoring one or more load characteristics of one or more of the content server system in the network. determining if one or more of the load characteristics exceeds a predefined overload metric, and withdraw a dynamic routing protocol advertisement of the content server system if the load exceeds the predefined overload metric. (para.0136,0137,0141,0155,0164, note: load characteristic is inherent).

**Referring to claim 12,**

McCanne discloses the method of claim 1, wherein the load characteristics is a measure of disk utilization, CPU utilization, or I/O latency.

(para.0136,0137,0141,0155,0164, note: disk and CPU utilization is inherent).

**Referring to claim 13,**

McCanne discloses the method of claim 1, further comprising: for each content server system for which advertisement was discontinued, restarting advertisement of the

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content server system when the load characteristic decreases below the predefined overload metric.(para. 208, (para.0136,0137,0141,0155,0164, note: load characteristic is inherent).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne (US Published Application No. 2005/0010653) in view of Christensen et al. (US Patent 6,330,605, filed 11/19/1998, hereinafter Christensen).

McCanne teaches the method of claim 8 but fails to explicitly teach that at least one of the cache systems comprises at least two cache servers connected in a cluster, and wherein the at least two cache servers are coupled to a switch usable to select from among the at least two cache servers based on a selection policy.

Christensen teaches a proxy cache cluster system comprising at least two cache servers connected in a cluster (Fig. 3, col. 5, lines 32-40), and wherein the at least two cache servers are coupled to a switch usable to select from among the at least two cache servers based on a selection policy (col. 5, lines Fig. 5: assign loading based on ratings of cache servers).



Therefore, it would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of McCanne and Christensen because they both deal with distributing content from content providers to requesters. Furthermore, the teaching of Christensen to modify the content distribution system taught by McCanne to implement a cache as a cache cluster of at least two cache servers would increase the availability of services by providing load balancing within the cache (See Christensen col. 2, lines 60-64).

### ***Conclusion***

**Examiner's note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abp  
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